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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,857	06/26/2000	William A. Skinner	FTI "AG"	4206
500	7590	06/13/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			BLOUNT, STEVEN	
701 FIFTH AVE			ART UNIT	
SUITE 6300			PAPER NUMBER	
SEATTLE, WA 98104-7092			2661	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,857

Applicant(s)

SKINNER ET AL.

Examiner

Steven Blount

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25 - 32, 34 - 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25 - 30, 32, 34 - 36, 38 - 41 is/are rejected.
- 7) ☒ Claim(s) 31 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25 – 27, 30, 32, 36, and 38 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,103,548 to Reid et al.

With respect to claim 25, Reid teaches, in col 4 lines 40+, inserting bushing 68 in opening 88 in the workpiece, and then inserting the sleeve 66 and mandrel 10 into the bushing/workpiece as shown in figure 5, and wherein it is also shown in figure 5 that the bushing and sleeve are closely insertable. This is followed by radial displacement of the sleeve resulting in substantially equal displacement of the bushing and sleeve, as is shown in figure 6, where the amount of displacement by the sleeve in the radial direction is substantially the same as the amount of displacement of the bushing 68. Although it is not explicitly taught that the bushing and sleeve are both metal members, In col 1 line 37, it is taught that metal is used for members such as these in similar processes; and, in view of the process taught and the shading of the members shown in the figures, one of ordinary skill in the art would recognize that it is obvious that processes such as these are meant to be carried out on metal members.

With respect to the following claims (hereinafter referred to as "CI"), note the following: CI 26: circular diameters (see figure 2); CI 27: member 84 is a structural

Art Unit: 2661

member; CI 30: see figure 2; CI 32: see the rejection of claim 25, and note that fatigue is inherent in the process described in col 6, lines 63+; CI 33: having the fatigue life increased by at least 200% is a parametric result whose obtainable value would be obvious to one of ordinary skill in the art; CI 36: see figure 2; CI 38: see the rejection of claim 25, and note that plastic deformation is taught in col 4 line 60; CI 39: see figure 2; CI 40: see figure 2; CI 41: note the discussion of fatigue life above.

3. Claims 28, 29, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,103,548 to Reid et al as applied above, and further in view of U.S. patent 4,557,033 to Champoux.

With regard to claim 28, Reid et al teaches the invention as described above, but does not teach that the radial displacement is dependent on the modulus of elasticity and ultimate strength of the first and second bushings. Champoux teaches a similar process wherein it is noted that the choice of yield strength and modulus of elasticity provides varying critical fatigue expansion values. See col 14, lines 26+. It would have been obvious to one of ordinary skill in the art at the time of the invention to have chosen proper materials for the workpiece of Reid et al based upon ultimate strength and modulus of elasticity, in light of the teachings of Champoux, in order to produce a join between the bushing and workpiece of proper strength. CI 29: see flanges being formed in figure 4; CI 34: see discussion of modulus of elasticity above; CI 35: see figure 4.

4. Claims 25 and 32 are rejected under 35 U.S.C. 103(a) as being obvious over European patent 891007 to Ganslein.

With regard to claim 25, Ganslein teaches the installation of bushings 3 and 5 as shown in figure 2, wherein a mandrel 11 is subsequently drawn through them. See line 22 of the translation, and also the action of member 11 in figure 3. Further note that Ganslein teaches "providing a second bushing, having a cylindrical section whose outside diameter corresponds approximately to the inside diameter of the first bushing" in lines 16 – 17. While the bushing is not defined to be made of metal, one of ordinary skill in the art would recognize that a "bushing of electrically conductive material" (see line 2 of the translation) is typically made of metal. With respect to claim 32, note the above, as well as the fact that increase in the fatigue life of the work member is inherent in the process taught in Ganslein.

5. Claim 38 is rejected under 35 U.S.C. 103(a) as being obvious over European patent 891007 to Ganslein as applied above, and further in view of U.S. patent 5,103,548 to Reid et al.

Ganslein teaches the invention as described above, but does not teach the bushing to be laterally plastically deformable. The plastic deformation of the bushings is, as discussed above, taught in Reid et al wherein it would have been obvious to one of ordinary skill in the art to have used a plastically deformable material for the bushings in Ganslein in light of the teachings of Reid to assure a proper join of the bushings together, as well as to the workpiece.

6. Applicants arguments that claims 31 and 37 should be allowable over Reid/Shimizu in view of the fact that Reid/Shimizu is alleged to be non-analogous art have been considered, and these rejections have been withdrawn on this basis.

Art Unit: 2661

Therefore, claims 31 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 9/13/2004 have been fully considered but they are not persuasive.

The applicant argues that member 66 in Reid et al does not constitute a bushing because it is removable, and applicant provides an affidavit submitted by Reid himself stating that "as currently understood in the art, a bushing remains fixed with the assembly after installation to provide a bearing surface." The examiner disagrees, and notes that the dictionary definition of the term bushing is "*removable* cylindrical lining for an opening (as of a mechanical part) used to limit the size of the opening, *resist abrasion*, or serve as a guide." Merriam Webster's Collegiate Dictionary, Tenth Edition, 1997 page 154, emphasis added. The examiner additionally notes that removable bushings are known in the art. See, for example, US patents 2661182, 2188596, 3244034.

Applicant also argues that Ganslein "does not disclose, teach, or even suggest an outer bushing could be radially expanded into a work member when a dual bushing assembly is employed" and provides statements in the affidavit to support this assertion.

In response, the examiner notes that with respect to claim 25, *radial expansion into a work member is never claimed*, and the mere mention of a work member is not even made in this claim. With regard to claims 32 and 38, the examiner believes that it

Art Unit: 2661

is apparent that the process shown in figure 3 of Ganslein, wherein mandrel 12 is drawn through joined members 10/14, would result in the formation of hoop stresses in these members which would be transmitted to the work member 9 which surrounds them. Applicants remark that member 14 shows thinning while member 10 does not is most likely due to the fact that members 10 and 14 are shown to be made of different materials. The examiner submits that the process shown in figure 3, including expansion into the hollow at the tapered end of member 14, would result in the formation of stresses in member 9. The fact that a threaded bolt "can also be advantageously provided" (description translation, par 6), wherein this is as stated to be an optional, additional embodiment, does not detract from the fact that the teachings of figure 3 would have suggested to one of ordinary skill in the art that compressive stresses formed in members 4 and 6 are transmitted to the work member 9 when the mandrel is drawn through them.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

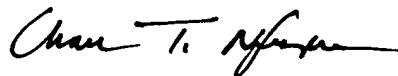
Art Unit: 2661

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571 - 272 - 3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen, can be reached on 571 - 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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